

Our ref: ML/GML24100

Date: 9<sup>th</sup> March 2026

**BY POST AND EMAIL**

Urbanwave 122 Limited  
19 Cave Road  
Brough  
East Yorkshire  
HU15 1HA

**For the attention of R. Burns**

Dear Richard

**GML24100: Starkey Street, Heywood, Rochdale**

At Urbanwave 122 Ltd's request we attended the above site recently to undertake thickness determination and laboratory analysis of capping material (topsoil) on soft landscaped area relating to areas requiring capping as directed by the remedial strategy for the development. Previous reports for the site are:

- Geo-Matters – Phase II Geo-Environmental Investigation Report, Ref GML24100/1/1 dated March 2024;
- Geo-Matters – Remedial Method Statement, Ref GML24100/3/1 dated April 2024;
- Geo-Matters - Screening Values for Residential without Plant Uptake Ref 2018-05-29 V3.1.

*Capping Validation*

This capping validation letter has been completed as proof of capping suitability and applied thicknesses in any soft landscaped areas of the referenced plots as validated by Geo-Matters Limited.

Capping was to be applied in areas around WS1 and WS3 as outlined on the Soil Remediation Plan (GML24100/003) presented within the above referenced documents.

On attendance at the site and with reference to the Proposed Site Plan (F9D Ref 20.043/10 Rev F, it was noted that the area around WS1 had been capped by hard standing (building and yard areas), therefore no further assessment was required and the location not considered further. Conversely the area around WS3 requiring remedial works as it included a proposed general soft landscaped area, therefore capping validation of thickness and chemical status was required as outlined in the RMS.

*Capping Material*

The above referenced documents state that a minimum thickness of 300mm inert capping is required to be placed within general soft landscaped areas, this capping validation report addresses the capping applied to the relevant remedial areas, the table below outlines the validation assessment / requirements.

| Plots Validations | Capping thickness required (in mm) | Pass/Fail |
|-------------------|------------------------------------|-----------|
| WS3               | 300                                | Pass      |

*Site Visit*

An Engineer from Geo-Matters Ltd visited site at the request of the Client on 23<sup>rd</sup> Feb 2026 to undertake the validation exercise within the soft landscaped areas of:

- Area around WS3.

A Photographic Record Plan is enclosed. It was evident from the validation exercise that the main soft landscaped areas around WS3 contained in excess of capping material thicknesses outlined above comprising a hard dig stone layer (from a stone crane base installed during construction of the building present over WS3 area) overlain by 250mm topsoil.



Three samples of the topsoil within the soft landscaping was subject to chemical analysis, please find below our findings:

#### *Sampling Regime*

The above referenced Remedial Method Statement requires that the capping soils applied to be subject to laboratory chemical analysis. All samples were taken in snap top plastic containers, any samples suspected of containing any hydrocarbon or volatile compounds were placed in 250ml amber glass jars or vials. All samples were placed in cooled containers and transported to Geo-Matters Ltd's storage facility in Nottingham before awaiting transfer to a UKAS / MCERTS accredited laboratory.

The samples taken were analysed for a range of contaminants in general accordance with NHBC Standards Chapter 4.1 'Land Quality – managing ground conditions', CLR 8 'Potential Contaminants for the Assessment of Land' and the referenced Remediation Method Statement. The soil samples were analysed for the following parameters: arsenic, cadmium, chromium, lead, mercury, copper, nickel, zinc, selenium, speciated poly-aromatic hydrocarbons (PAH), sulphide, phenols, pH, sulphate, speciated total petroleum hydrocarbons (TPH) and asbestos.

A Sample Location Plan has been attached for your information.

#### *Laboratory Analysis*

Representative soil samples from the exploratory locations were analysed for the range of contaminants outlined above. The environmental analysis was scheduled by Geo-Matters Ltd. and carried out by a UKAS / MCERTS accredited laboratory. The full details of the test results are attached and are summarised in the table below.

#### **Laboratory analysis**

| <b>Determinand</b>           | <b>No. of samples analysed</b> | <b>Maximum Concentration (mg/kg)</b> | <b>Acceptance Criteria (mg/kg)<sup>#</sup></b> | <b>No. exceeding threshold</b> |
|------------------------------|--------------------------------|--------------------------------------|------------------------------------------------|--------------------------------|
| <b><i>Metals</i></b>         |                                |                                      |                                                |                                |
| Arsenic                      | 3                              | <10                                  | 40                                             | 0                              |
| Cadmium                      | 3                              | 0.8                                  | 85                                             | 0                              |
| Chromium                     | 3                              | 6.4                                  | 910                                            | 0                              |
| Lead                         | 3                              | 46                                   | 310                                            | 0                              |
| Mercury                      | 3                              | <2.5                                 | 56                                             | 0                              |
| Selenium                     | 3                              | <8                                   | 430                                            | 0                              |
| Copper                       | 3                              | 27                                   | 7100                                           |                                |
| Zinc                         | 3                              | 94                                   | 40000                                          |                                |
| Nickel                       | 3                              | 19                                   | 180                                            | 0                              |
| <b><i>Organics</i></b>       |                                |                                      |                                                |                                |
| Benzo(a)pyrene <sup>**</sup> | 3                              | 0.27                                 | 3.2                                            | 0                              |
| Phenol                       | 3                              | <1.0                                 | 750                                            | 0                              |
| TPH                          |                                |                                      |                                                |                                |
| C5-10                        | 3                              | 5.4                                  | 27                                             | 0                              |
| C10-21                       | 3                              | 100                                  | 130                                            | 0                              |
| C21-40                       | 3                              | 640                                  | 1900                                           | 0                              |
| Asbestos <sup>**</sup>       | 3                              | NAD                                  | <0.001%                                        | 0                              |

<sup>a</sup> DEFRA C4SL values for a residential without plant uptake end use; <sup>b</sup> LQM 'S4UL' values (at 1% SOM for organics) for a residential without plant uptake end use (Copyright Land Quality Management Ltd reproduced with permission; Publication Number S4UL3676 All Rights Reserved); <sup>c</sup> GML general screening level; \* Contaminants all recorded below the highest laboratory limit of detection; and N/A = Not Applicable, ND = Not Detected, D = Detected.



### **Metals**

The results were compared with the referenced Tier 1 Screening Values (T1SVs) which are an initial and conservative set of values but which are considered most appropriate (overall) to the proposed residential development – therefore assessment targets would be residential without plant uptake end use.

None of the samples analysed for zootoxic or phytotoxic metals recorded concentrations in excess of their respective T1SVs. On this basis, **no risks** have been identified from these determinands at the subject site.

### **Inorganics and Organics**

In lieu of published DEFRA Category 4 Screening Levels for inorganics and organics, the results have been assessed by comparison to available alternative T1SVs including the LQM / CIEH Generic Assessment Criteria (2nd Edition).

#### **Inorganics**

The pH values recorded from the soil samples varied between 8.0 and 8.5, indicating that the near neutral soil conditions prevail within soils obtained at the site.

#### **Organics**

The significance of the PAH laboratory results have been assessed using the T1SV for benzo(a)pyrene. This is considered, in terms of toxicity, to present the greatest hazard to human health. The T1SV of 3.2mg/kg (residential end use without plant uptake) was not exceeded within any of the samples tested. On this basis, **no risks** have been identified from these determinands at the subject site.

#### **Total Petroleum Hydrocarbons (TPH)**

3 no. samples were analysed for TPH across the site. The samples analysed did not record concentrations in excess of the respective Tier 1 Screening Values (T1SVs). On this basis, **no risks** have been identified from TPH at the subject site based on the proposed residential end use.

#### **Asbestos**

No asbestos containing materials or free fibres were recorded in the 3 no. samples analysed, and on this basis, **no risks** have been identified from these determinands at the subject site based on the proposed residential end use.

#### **General Contaminants**

##### *Visual, Olfactory and Field Measurements*

No significant visual or olfactory evidence of any other potential contamination was noted within any other exploratory locations advanced at the site.

### **Conclusions**

It can be seen from the laboratory results that the soils obtained from the capping materials placed in soft landscaped areas around WS3 at the above site recorded concentrations below current relevant acceptance criteria and indicate that there are **no significantly** elevated levels of contaminants present in these onsite soils, and that the photos show that the recommended capping thickness has been applied within the associated soft landscaped area. It is therefore; Geo-Matters Limited's professional opinion that the Starkey Street development has been remediated in line with the referenced Remedial Method Statement, subject to the approval of the Local Authority.

We hope that the above is sufficient for your present requirements, but should you have any further queries then please do not hesitate to contact the undersigned.

Yours sincerely  
for Geo-Matters Ltd.

Mark Lewis BEng(Hons) CEnv MSOE MIEEnvSc FFB  
**Managing Director**

Encs

Plans  
Laboratory Results



DO NOT SCALE

NOTES:

 Approx. Site Boundary

**GEO**MATTERS  
consulting engineers

www.geo-matters.com  
info@geo-matters.com

CLIENT:

**URBANWAVE**

PROJECT:

Starkey Street, Heywood  
Rochdale

TITLE:

Proposed Site Layout Plan

SCALE@SIZE :

NTS

ISSUE:

Final

DESIGN/DRAWN :

AT

DATE:

March 2026

PROJECT No:

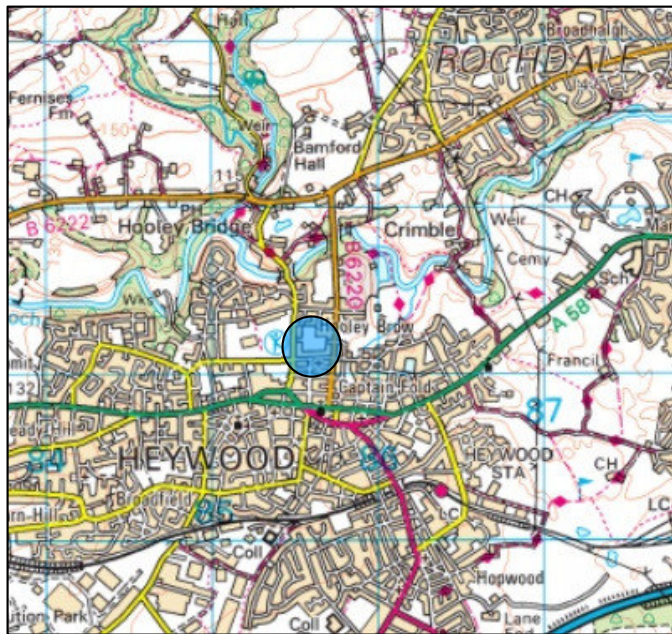
GML24100

DRAWING No:

001

© Geo-Matters Ltd

The proposed layout plan shown is an extract taken from Drawing 20.043/10 'Proposed Site Plan' dated Oct 2023 by Architectural Solutions.



DO NOT SCALE

NOTES:

 Approx. Site Location

 Approx. Site Boundary

Nearest Postcode: OL10 4JS



**GEO**MATTERS  
consulting engineers

[www.geo-matters.com](http://www.geo-matters.com)  
[info@geo-matters.com](mailto:info@geo-matters.com)

CLIENT:

**URBANWAVE**

PROJECT:

Starkey Street, Heywood  
Rochdale

TITLE:

Site Location Plan

SCALE@SIZE :

NTS

ISSUE:

Final

DESIGN/DRAWN :

AT

DATE:

March 2026

PROJECT No:

GML24100

DRAWING No:

002

© Geo-Matters Ltd



- DO NOT SCALE
- NOTES:
-  Approx. Site Boundary
  -  Remedial Sample Location



www.geo-matters.com  
info@geo-matters.com

CLIENT:

**URBANWAVE**

PROJECT:

Starkey Street, Heywood  
Rochdale

TITLE:

Exploratory Hole Layout Plan

SCALE@SIZE :  
NTS

ISSUE:  
Final

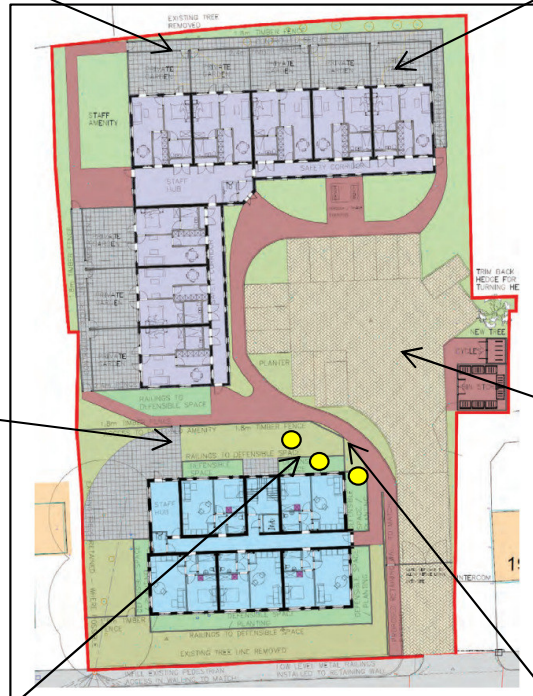
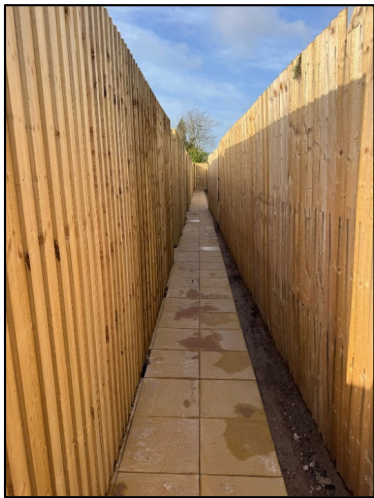
DESIGN/DRAWN :  
AT

DATE:  
March 2026

PROJECT No:  
GML24100

DRAWING No:  
003

© Geo-Matters Ltd



DO NOT SCALE

NOTES:

 Approx. Site Boundary

 Remedial Exploratory Location



www.geo-matters.com  
info@geo-matters.com

CLIENT:

**URBANWAVE**

PROJECT:

Starkey Street, Heywood  
Rochdale

TITLE:

General Photographic Record

|                         |                     |
|-------------------------|---------------------|
| SCALE@SIZE :<br>NTS     | ISSUE:<br>Final     |
| DESIGN/DRAWN :<br>AT    | DATE:<br>March 2024 |
| PROJECT No:<br>GML24100 | DRAWING No:<br>004  |

© Geo-Matters Ltd

|                                 |                            |
|---------------------------------|----------------------------|
| Analytical Test Report          | E26/02560/GEM/26-08005     |
| Clients Project Reference       | Heywood, Rochdale GML24100 |
| Clients Order Number            | ML/GML24100/003            |
| Sample(s) Analysed              | 3                          |
| Sample(s) received / instructed | 25/02/2026 / 25/02/2026    |
| Sample(s) Tested                | 25/02/2026 to 05/03/2026   |
| Report issued                   | 06/03/2026                 |
| Report issue number             | 1                          |

**Tested on Behalf of**  
Geo-Matters Limited  
104 Bondgate  
Castle Donington

DE74 2NR

Signed



**James Gane**  
Analytical Services Manager

**Notes:**

**General**

This report shall not be reproduced except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and other than the asbestos test(s) these results are not covered by our accreditation

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

**Deviating Samples**

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

**Accreditation Key**

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

Analytical Test Results - ENV Analysis Solids

| Lab Reference                   |           |          |       |               | 715626               | 715627               | 715628               |
|---------------------------------|-----------|----------|-------|---------------|----------------------|----------------------|----------------------|
| Client Sample ID                |           |          |       |               | -                    | -                    | -                    |
| Client Sample Location          |           |          |       |               | Area of WS3a         | Area of WS3b         | Area of WS3c         |
| Client Sample Type              |           |          |       |               | -                    | -                    | -                    |
| Client Sample Number            |           |          |       |               | -                    | -                    | -                    |
| Depth - Top (m)                 |           |          |       |               | 0.15                 | 0.15                 | 0.15                 |
| Depth - Bottom (m)              |           |          |       |               | 0.15                 | 0.15                 | 0.15                 |
| Date of Sampling                |           |          |       |               | 23/02/2026           | 23/02/2026           | 23/02/2026           |
| Time of Sampling                |           |          |       |               | -                    | -                    | -                    |
| Sample Matrix                   |           |          |       |               | Sand                 | Sand                 | Sand                 |
| Determinant                     | Code      | Units    | LOD   | Accreditation |                      |                      |                      |
| Arsenic                         | ICPMETS   | mg/kg    | 10    | M             | < 10                 | < 10                 | < 10                 |
| Cadmium                         | ICPMETS   | mg/kg    | 0.2   | M             | 0.6                  | 0.7                  | 0.8                  |
| Chromium (Total)                | ICPMETS   | mg/kg    | 1     | U             | 5.2                  | 5.7                  | 6.4                  |
| Copper                          | ICPMETS   | mg/kg    | 2     | M             | 23                   | 24                   | 27                   |
| Lead                            | ICPMETS   | mg/kg    | 1.5   | M             | 42                   | 41                   | 46                   |
| Mercury                         | ICPMETS   | mg/kg    | 2.5   | U             | < 2.5                | < 2.5                | < 2.5                |
| Nickel                          | ICPMETS   | mg/kg    | 1     | M             | 19                   | 12                   | 13                   |
| Selenium                        | ICPMETS   | mg/kg    | 8     | N             | < 8.0                | < 8.0                | < 8.0                |
| Zinc                            | ICPMETS   | mg/kg    | 2     | M             | 78                   | 80                   | 94                   |
| Total TPH (>C8 to C10) [1]      | TPHS      | mg/kg    | 5     | M             | < 5.0                | 5.4                  | 5.1                  |
| Total TPH (>C10 to C12) [1]     | TPHS      | mg/kg    | 5     | M             | < 5.0                | < 5.0                | < 5.0                |
| Total TPH (>C12 to C16) [1]     | TPHS      | mg/kg    | 5     | M             | 15                   | 12                   | 10                   |
| Total TPH (>C16 to C21) [1]     | TPHS      | mg/kg    | 5     | M             | 100                  | 100                  | 75                   |
| Total TPH (>C21 to C40) [1]     | TPHS      | mg/kg    | 10    | M             | 640                  | 470                  | 480                  |
| Total TPH (C6 to C40) [3]       | TPHS      | mg/kg    | 15    | N             | 760                  | 590                  | 570                  |
| Total Phenols                   | SKALARPHS | mg/kg    | 1     | M             | < 1.0                | < 1.0                | < 1.0                |
| Chromium (Hexavalent)           | SKALARHCS | mg/kg    | 1     | N             | < 2.0                | < 2.0                | < 2.0                |
| Acid Soluble Sulphate           | ASSO4S    | %        | 0.01  | N             | 0.04                 | 0.04                 | 0.04                 |
| pH                              | PHS       | pH units | 1     | M             | 8.0                  | 8.5                  | 8.3                  |
| Water Soluble Sulphate (as SO4) | ANIONSS   | mg/L     | 10    | N             | 46                   | 42                   | 57                   |
| Asbestos                        | ASB       | p/a      | -     | U             | No Asbestos Detected | No Asbestos Detected | No Asbestos Detected |
| FOC                             | TOCS      | -        | 0.005 | U             | 0.044                | 0.041                | 0.042                |
| Acenaphthene                    | PAHASRDS  | mg/kg    | 0.02  | M             | < 0.02               | 0.03                 | 0.03                 |
| Acenaphthylene                  | PAHASRDS  | mg/kg    | 0.02  | U             | 0.04                 | 0.02                 | 0.02                 |
| Anthracene                      | PAHASRDS  | mg/kg    | 0.02  | U             | 0.09                 | 0.05                 | 0.05                 |
| Benzo[a]anthracene              | PAHASRDS  | mg/kg    | 0.02  | M             | 0.30                 | 0.15                 | 0.16                 |
| Benzo[a]pyrene                  | PAHASRDS  | mg/kg    | 0.02  | M             | 0.27                 | 0.14                 | 0.15                 |
| Benzo[b]fluoranthene            | PAHASRDS  | mg/kg    | 0.02  | M             | 0.33                 | 0.17                 | 0.18                 |
| Benzo[ghi]perylene              | PAHASRDS  | mg/kg    | 0.02  | M             | 0.18                 | 0.09                 | 0.10                 |
| Benzo[k]fluoranthene            | PAHASRDS  | mg/kg    | 0.02  | M             | 0.13                 | 0.07                 | 0.07                 |
| Chrysene                        | PAHASRDS  | mg/kg    | 0.02  | M             | 0.30                 | 0.15                 | 0.17                 |

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

Analytical Test Results - ENV Analysis Solids

| Lab Reference               |          |       |      |               | 715626       | 715627       | 715628       |
|-----------------------------|----------|-------|------|---------------|--------------|--------------|--------------|
| Client Sample ID            |          |       |      |               | -            | -            | -            |
| Client Sample Location      |          |       |      |               | Area of WS3a | Area of WS3b | Area of WS3c |
| Client Sample Type          |          |       |      |               | -            | -            | -            |
| Client Sample Number        |          |       |      |               | -            | -            | -            |
| Depth - Top (m)             |          |       |      |               | 0.15         | 0.15         | 0.15         |
| Depth - Bottom (m)          |          |       |      |               | 0.15         | 0.15         | 0.15         |
| Date of Sampling            |          |       |      |               | 23/02/2026   | 23/02/2026   | 23/02/2026   |
| Time of Sampling            |          |       |      |               | -            | -            | -            |
| Sample Matrix               |          |       |      |               | Sand         | Sand         | Sand         |
| Determinant                 | Code     | Units | LOD  | Accreditation |              |              |              |
| Dibenzo[a,h]anthracene      | PAHASRDS | mg/kg | 0.02 | M             | 0.05         | 0.03         | 0.03         |
| Fluoranthene                | PAHASRDS | mg/kg | 0.02 | M             | 0.79         | 0.41         | 0.43         |
| Fluorene                    | PAHASRDS | mg/kg | 0.02 | M             | < 0.02       | 0.02         | 0.02         |
| Indeno[1,2,3,-cd]pyrene     | PAHASRDS | mg/kg | 0.02 | M             | 0.18         | 0.10         | 0.11         |
| Naphthalene                 | PAHASRDS | mg/kg | 0.02 | M             | < 0.02       | < 0.02       | < 0.02       |
| Phenanthrene                | PAHASRDS | mg/kg | 0.02 | M             | 0.23         | 0.17         | 0.15         |
| Pyrene                      | PAHASRDS | mg/kg | 0.02 | M             | 0.74         | 0.38         | 0.41         |
| Total PAH (Sum of USEPA 16) | PAHASRDS | mg/kg | 0.32 | U             | 3.7          | 2.0          | 2.1          |

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

Analytical Test Results - EPHVPHS

| Lab Reference               |      |       |      |               | 715626       | 715627       | 715628       |
|-----------------------------|------|-------|------|---------------|--------------|--------------|--------------|
| Client Sample ID            |      |       |      |               | -            | -            | -            |
| Client Sample Location      |      |       |      |               | Area of WS3a | Area of WS3b | Area of WS3c |
| Client Sample Type          |      |       |      |               | -            | -            | -            |
| Client Sample Number        |      |       |      |               | -            | -            | -            |
| Depth - Top (m)             |      |       |      |               | 0.15         | 0.15         | 0.15         |
| Depth - Bottom (m)          |      |       |      |               | 0.15         | 0.15         | 0.15         |
| Date of Sampling            |      |       |      |               | 23/02/2026   | 23/02/2026   | 23/02/2026   |
| Time of Sampling            |      |       |      |               | -            | -            | -            |
| Sample Matrix               |      |       |      |               | Sand         | Sand         | Sand         |
| Determinant                 | Code | Units | LOD  | Accreditation |              |              |              |
| Total TPH (>C8 to C10) [1]  | TPHS | mg/kg | 5    | M             | < 5.0        | 5.4          | 5.1          |
| Total TPH (>C10 to C12) [1] | TPHS | mg/kg | 5    | M             | < 5.0        | < 5.0        | < 5.0        |
| Total TPH (>C12 to C16) [1] | TPHS | mg/kg | 5    | M             | 15           | 12           | 10           |
| Total TPH (>C16 to C21) [1] | TPHS | mg/kg | 5    | M             | 100          | 100          | 75           |
| Total TPH (>C21 to C40) [1] | TPHS | mg/kg | 10   | M             | 640          | 470          | 480          |
| Total TPH (C6 to C40) [3]   | TPHS | mg/kg | 15   | N             | 760          | 590          | 570          |
| Total TPH (C6-C8) [7]       | VPHS | mg/kg | 0.16 | N             | < 0.16       | < 0.16       | < 0.16       |

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

Sample Descriptions

| Lab Reference | Client Sample ID | Client Sample Location | Client Sample Type | Client Sample Number | Description                                                  | Moisture Content (%) | Stone Content (%) | Passing 2mm test sieve (%) |
|---------------|------------------|------------------------|--------------------|----------------------|--------------------------------------------------------------|----------------------|-------------------|----------------------------|
| 715626        | -                | Area of WS3a           | SOIL               | -                    | Dark brown slightly gravelly slightly clayey silty sand slag | 64                   | 16                | 89                         |
| 715627        | -                | Area of WS3b           | SOIL               | -                    | Dark brown slightly gravelly very silty sand slag            | < 0.1                | 19                | 86                         |
| 715628        | -                | Area of WS3c           | SOIL               | -                    | Dark brown slightly gravelly slightly clayey silty sand slag | < 0.1                | 26                | 85                         |

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

Sample Comments

| Lab Reference | Client Sample ID | Client Sample Location | Client Sample Type | Client Sample Number | Comments                                                                        |
|---------------|------------------|------------------------|--------------------|----------------------|---------------------------------------------------------------------------------|
| 715626        | -                | Area of WS3a           | SOIL               | -                    | Chromium(Hexavalent) - Reporting limit raised due to sample matrix interference |
| 715627        | -                | Area of WS3b           | SOIL               | -                    | Chromium(Hexavalent) - Reporting limit raised due to sample matrix interference |
| 715628        | -                | Area of WS3c           | SOIL               | -                    | Chromium(Hexavalent) - Reporting limit raised due to sample matrix interference |

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

| Test Code  | Test Name / Reference                    | Sample condition for analysis | Sample Preparation      | Test Details                                                                                                                                                                                                                  |
|------------|------------------------------------------|-------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANIONSS    | MS - CL - Anions by Aquakem (2:1Extract) | Oven dried                    | Passing 2mm test sieve  | Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio                                                                                          |
| ASB        | MS - AS - Asbestos                       | -                             | -                       | Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures" |
| ASSO4S     | MS - CL - Acid Soluble Sulphate          | Oven Dried                    | Passing 2mm test sieve  | Determination of total sulphate in soils by acid extraction followed by ICP analysis                                                                                                                                          |
| ICPMETS    | MS - CL - ICP Metals                     | Air dried                     | Passing 10mm test sieve | Determination of metals in soils via ICP                                                                                                                                                                                      |
| PAHASRDS   | MS - CL - PAH (As Received)              | As received                   | Passing 10mm test sieve | Determination of Polyaromatic hydrocarbons in soil via GC-MS                                                                                                                                                                  |
| PHS        | MS - CL - pH in Soils                    | As received                   | Passing 10mm test sieve | Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)                                                                                                                                          |
| SAMPLEPREP | MS - CL - Sample Preparation             | -                             | -                       | Preparation of samples (including determination of moisture content) to allow for subsequent analysis                                                                                                                         |
| SKALARHCS  | MS - CL - Hexavalent Chromium by Skalar  | As received                   | Passing 10mm test sieve | Determination of hexavalent chromium in soil using Skalar segmented flow analyser                                                                                                                                             |
| SKALARPHS  | MS - CL - Phenols by Skalar              | As received                   | Passing 10mm test sieve | Determination of total phenols in soil using Skalar segmented flow analyser                                                                                                                                                   |
| TOCS       | MS - CL - TOC Eltra                      | Air Dried                     | Passing 10mm test sieve | Determination of Total Organic Carbon in soils                                                                                                                                                                                |
| TPHS       | MS - CL - TPH (GC-FID)                   | As received                   | Passing 10mm test sieve | Determination of Total Petroleum Hydrocarbons in soil using GC-FID                                                                                                                                                            |
| VPHS       | MS - CL - VPH                            | As received                   | Passing 10mm test sieve | Determination of VPH in soils via Headspace-GC-MS                                                                                                                                                                             |

E26/02560/GEM/26-08005

Heywood, Rochdale GML24100

#### HWOL TPH Acronym Index

| Acronym | Description                                                         |
|---------|---------------------------------------------------------------------|
| HS      | Headspace Analysis                                                  |
| EH      | Extractable Hydrocarbons - i.e. everything extracted by the solvent |
| CU      | Clean-up e.g. by florisil, silica gel                               |
| 1D      | GC - Single coil gas chromatography                                 |
| Total   | Aliphatics and Aromatics                                            |
| AL      | Aliphatics Only                                                     |
| AR      | Aromatics Only                                                      |
| 2D      | GC-GC - Double Coil Gas Chromatography                              |
| #1      | EH_Total but with humics mathmatically subtracted                   |
| #2      | EH_Total but with fatty acids mathmatically subtracted              |
| _       | Operator - underscore to separate acronyms (except for +)           |
| +       | Operator to indicate cumlative e.g. EH+HS_Total or EH_CU+HS_Total   |
| MS      | Mass Spectrometry                                                   |

| Key of Codes |                      |
|--------------|----------------------|
| [1]          | EH_1D_TOTAL          |
| [2]          | EH_CU_1D_TOTAL       |
| [3]          | EH_CU+HS_1D_TOTAL    |
| [4]          | EH_1D+HS_MS_TOTAL    |
| [5]          | HS_MS_1D_AL          |
| [6]          | HS_MS_1D_AR          |
| [7]          | HS_MS_1D_TOTAL       |
| [8]          | EH_CU_1D_AL          |
| [9]          | EH_CU_1D_AR          |
| [10]         | EH_2D+HS_1D_TOTAL    |
| [11]         | EH_CU_2D+HS_1D_TOTAL |
| [12]         | EH_2D_TOTAL          |
| [13]         | EH_2D_AL             |
| [14]         | EH_2D_AR             |
| [15]         | EH_CU_2D_TOTAL       |
| [16]         | EH_CU_2D_AL          |
| [17]         | EH_CU_2D_AR          |